

Thompson, Alison (DEQ)

From: Malik, Junaid [jmalik@wrallp.com]
Sent: Friday, January 23, 2015 1:57 PM
To: Thompson, Alison (DEQ)
Cc: Etris, Robert
Subject: RE: PWCSA Nokesville: Followup on request for Waiver for Occoquan Policy

Thank you very much Alison.

The PWCSA is under a lot of pressure to bid this project because it has suffered delays for the past 4 years and they are concerned about the condition of the existing force main.

I would sincerely appreciate any help to expedite this review and decision.

Thanks.

Junaid.

From: Thompson, Alison (DEQ) [mailto:Alison.Thompson@deq.virginia.gov]
Sent: Friday, January 23, 2015 1:03 PM
To: Malik, Junaid
Cc: Etris, Robert; Thompson, Alison (DEQ)
Subject: RE: PWCSA Nokesville: Followup on request for Waiver for Occoquan Policy

Thank you for the updated information. We will take a look at it and get back to you as soon as possible.

Alison Thompson
Water Permits Technical Reviewer
Virginia Dept of Environmental Quality
Northern Regional Office
13901 Crown Ct
Woodbridge, VA 22193
(703) 583-3834
alison.thompson@deq.virginia.gov

→ new pumps rated at 150 gpm
same as current

From: Malik, Junaid [mailto:jmalik@wrallp.com]
Sent: Friday, January 23, 2015 10:34 AM
To: Thompson, Alison (DEQ)
Cc: Etris, Robert
Subject: RE: PWCSA Nokesville: Followup on request for Waiver for Occoquan Policy

Alison,

Based on the L20 pump run analysis in the earlier email, please note the exiting flow to the pump during rain events. The peak flow data was used to select the pumps in the revised design.

Nokesville SPS: Existing Flow/Pumping Analysis

2013 Averages*		2014 March / April Averages*	
Pump 1 Run Time (hours/day)	1.54	Pump 1 Run Time (hours/day)	3.00

Pump 2 Run Time (hours/day)	2.10
Total Run Time (hours/day)	3.64
2013 Averages*	
Pump 1 Volume Pumped (gpd)	11,925
Pump 2 Volume Pumped (gpd)	16,248
Total Volume Pumped (gpd)	28,173
Inflow (gpm)	19.6

Pump 2 Run Time (hours/day)	2.54
Total Run Time (hours/day)	5.54
2014 March / April Averages*	
Pump 1 Volume Pumped (gpd)	23,165
Pump 2 Volume Pumped (gpd)	19,639
Total Volume Pumped (gpd)	42,804
Inflow (gpm)	29.7

Peak Days							Rain (in)		
Date	P1 Hrs	P2 Hrs	P1 gpd	P2 gpd	Total gpd	Peak Factor	day prior	day of	day after
10-Jun-13	7.0	5.8	53,829	44,548	98,376	3.49	0.181	0.980	0.000
11-Jun-13	24.0	8.4	185,616	64,966	250,582	*	0.980	0.000	0.000
12-Jun-13	17.8	5.8	137,356	44,548	181,904	*	0.000	0.000	0.311
12-Jul-13	5.0	9.4	38,979	72,390	111,370	3.95	3.709	1.142	0.012
27-Nov-13	4.6	5.0	35,267	38,979	74,246	2.64	1.720	0.500	0.000
29-Dec-13	4.8	5.3	37,123	40,836	77,959	2.77	0.000	1.272	0.000
30-Dec-13	4.8	5.3	37,123	40,836	77,959	2.77	1.272	0.000	0.000
30-Mar-14	8.9	5.3	68,660	40,825	109,484	3.89	0.890	0.969	0.000
31-Mar-14	11.0	7.0	85,361	53,814	139,175	4.94	0.969	0.000	0.000
30-Apr-14	15.4	13.7	118,763	105,773	224,536	7.97	1.189	3.988	0.130
(ADF = 28,173 gpd)									
155.92769									

*Data from days with meter error and two large flow days in June, 2013 with run time discrepancies are not included.

pump rate (gpm) 128.9 per 2014 drawdown test

Thanks.

Junaid.

From: Malik, Junaid
Sent: Friday, January 23, 2015 10:21 AM
To: 'Thompson, Alison (DEQ)'

Cc: Etris, Robert

Subject: PWCSA Nokesville: Followup on request for Waiver for Occoquan Policy

Hello Alison,

I got your message.

Below is the data for the pump drawdown test that was conducted on May 20, 2014. The average inflow was around 21.9 GPM and the pump rate was around 128.9 GPM. I have also attached the run time data and the most current site plan of the station. We plan to use the existing wet well as a flow through grinder chamber.

Inflow Calculation

Water Level (in)	Change in Depth (ft)	Wetwell Dia. (ft)	Change in Volume (gal)	Time (Min)	Time (Sec)	Time total (min)	Influent (gpm)
20		6					
21	-0.08	6	-17.62	0.00	55.76	0.93	-18.96
22	-0.08	6	-17.62	1.00	36.89	0.69	-25.71
23	-0.08	6	-17.62	2.00	21.44	0.74	-23.74
24	-0.08	6	-17.62	2.00	58.65	0.62	-28.42

Inflow Calculation

Water Level (in)	Change in Depth (ft)	Wetwell Dia. (ft)	Change in Volume (gal)	Time (Min:Sec)	Time (Min:Sec)	*Time (min)	Influent (gpm)
25		6					
26	-0.08	6	-17.62	0.00	41.35	0.69	-25.57
27	-0.08	6	-17.62	1.00	32.56	0.85	-20.65
28	-0.08	6	-17.62	2.00	23.75	0.85	-20.66
29	-0.08	6	-17.62	3.00	7.29	0.73	-24.29

Inflow Calculation

Water Level (in)	Change in Depth (ft)	Wetwell Dia. (ft)	Change in Volume (gal)	Time (Min)	Time (Sec)	*Time (min)	Influent (gpm)
25							
29	-0.33	6	-70.50	3	7.29	3.12	-22.58
27							
30	-0.25	6	-52.87	2	38.47	2.64	-20.02
24							
30	-0.50	6	-105.75	5	28.53	5.48	-19.31
25							
30	-0.42	6	-88.12	3	26.63	3.44	-25.59

-21.88

Pump 1 Calculations							
30		6					
28	0.17	6	35.25	0.00	14.53	0.24	145.56
26	0.17	6	35.25	0.00	33.70	0.56	125.51
24	0.17	6	35.25	0.00	53.77	0.90	118.00
21	0.25	6	52.87	1.00	28.24	1.47	107.86

Pumping Calculations (Effluent)							
Water Level (in)	Change in Depth (ft)	Wetwell Dia. (ft)	Change in Volume (gal)	Time (Min:Sec)	Time (Min:Sec)	*Time (min)	Drawdown rate
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24	0.50	6	105.75	0.00	57.62	0.96	110.11

30							
24	0.50	6	105.75	1.00	3.00	1.05	100.71

30							
24	0.50	6	105.75	1.00	4.00	1.07	99.14

30							
24	0.50	6	105.75	0.00	53.77	0.90	118.00

Pump Range about 32 to 22

We had to revise the design to match the pump capacity to the existing (i.e. 150 GPM).

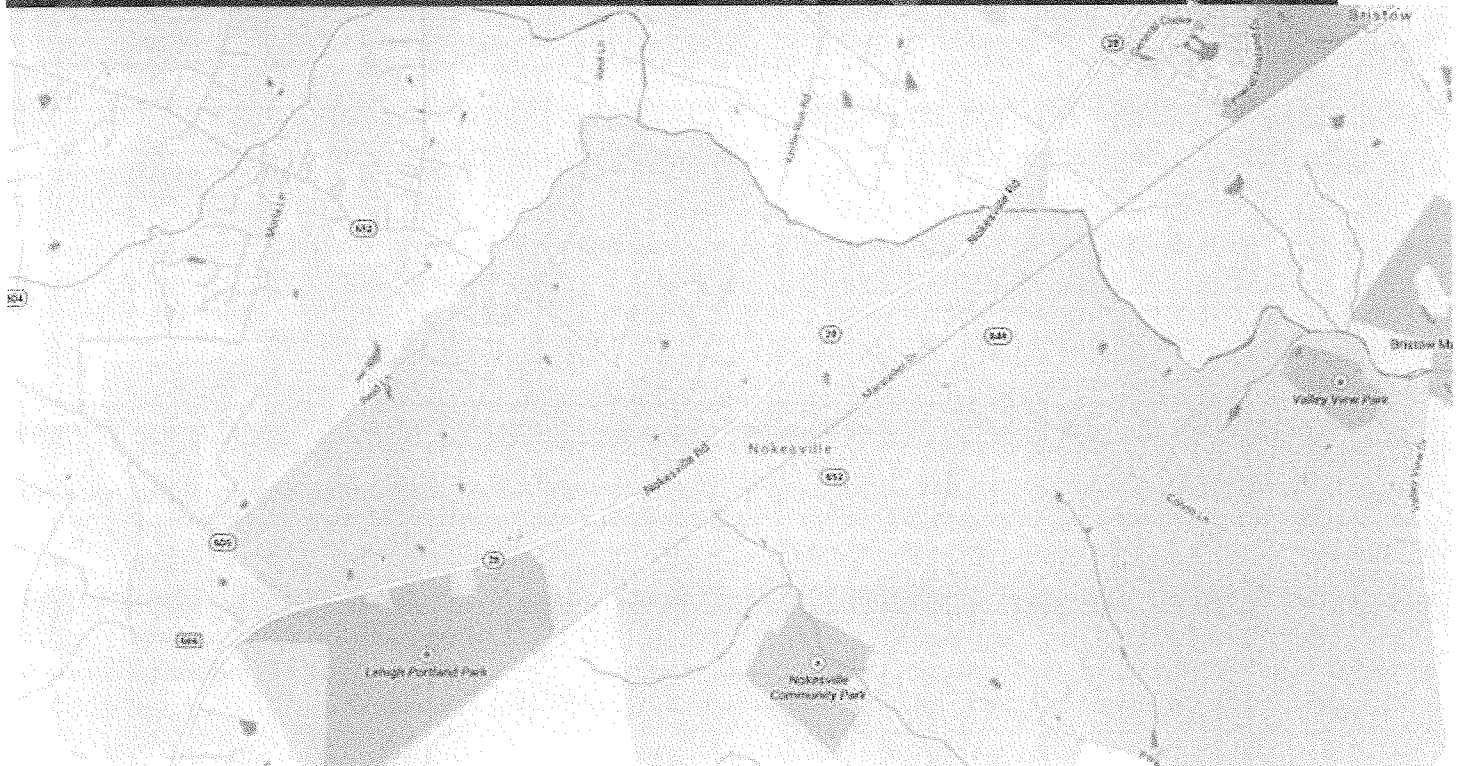
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- 1) Could you please tell us the average daily and maximum daily design flows for the PS as well as the actual current flows during the past year?

The pump station does not have a flow meter. Flows are estimated based on drawdown tests and pump run time recorders. In 2014 a drawdown test was completed. Pump rate was recorded at 128.9 gpm and the average inflow was 21.9 gpm during the test period (May 20, 2014). No additional development or re-development is anticipated.

- 2) Is there any storage capacity currently at the PS or the ability to divert upstream flows to another PS? No.
- 3) Has there been any I&I work done in the collection system for this PS? No.
- 4) Could you provide a map with the location of the PS in relation to the Occoquan Reservoir?

I have attached a screen shot below



Thanks for your help.

Junaid Malik, P.E., CFM | *Senior Project Engineer*

Whitman, Requardt & Associates, LLP

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(Main) 703.221.9717



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From: Thompson, Alison (DEQ) [<mailto:Alison.Thompson@deq.virginia.gov>]

Sent: Thursday, January 22, 2015 2:29 PM

To: Malik, Junaid

Cc: Thompson, Alison (DEQ)

Subject: RE: Occoquan Policy Waiver Request

I have been in meetings most of today, but have received your email and your phone message. I will be in touch tomorrow.

Alison Thompson
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From: Malik, Junaid [<mailto:jmalik@wrallp.com>]

Sent: Thursday, January 22, 2015 10:36 AM

To: Thompson, Alison (DEQ)

Subject: FW: Occoquan Policy Waiver Request

Hello Alison,

Hope you are doing well.

The Nokesville PS underwent some design changes since your last communication with Mr. Darrin Geldert back in April 2014. Darrin left our firm in late September 2014.

There has been a slight revision to the plan since the last communication. Do you have some time to talk about this project?

Thanks,

Junaid Malik, P.E., CFM | *Senior Project Engineer*

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From: Geldert, Darrin
Sent: Thursday, April 24, 2014 9:48 AM
To: 'Thompson, Alison (DEQ)'
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Alison,

I am working on a review of flow data. The station is not metered and we are reviewing pump run times. The pump station design point is 53 gpm, this is more than 2.5 times the flow estimated at the station in the PER.

There is no growth anticipated in the service area.

I have attached a map from the PWC GIS Mapper with the local drainages labeled. It appears the site drains south towards Slate Run, in what PWC has labeled the Cedar Run Watershed.

Darrin

Darrin Geldert P.E. | *Associate*
Whitman, Requardt & Associates, LLP
3701 Pender Dr. Suite 450
Fairfax, VA 22030
703.293.7403 (Direct)
703.293.9717 (Main)
703.273.6773 (Fax)

dgeldert@wrallp.com
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From: Thompson, Alison (DEQ) [<mailto:Alison.Thompson@deg.virginia.gov>]
Sent: Wednesday, April 23, 2014 8:31 AM
To: Geldert, Darrin
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ); Thompson, Alison (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Darrin,

If possible, we would like some more information on the existing and proposed design flows (average and peak) of this pump station. Also, is there any information on the observed maximum flows at the pump station?

The map is a bit difficult to read, so can you tell me the proximity of any streams or unnamed tributaries near the pump station?

Thank you,

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Sent: Tuesday, April 15, 2014 8:03 AM
To: Thompson, Alison (DEQ)
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Morning Alison,

Let me know if you need more information – I have included replies below.

Darrin

Darrin Geldert P.E. | *Associate*
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From: Thompson, Alison (DEQ) [<mailto:Alison.Thompson@deg.virginia.gov>]
Sent: Tuesday, April 15, 2014 6:40 AM
To: Geldert, Darrin
Cc: rtatariw@pwcsa.org; Thompson, Alison (DEQ)
Subject: Occoquan Policy Waiver Request

Good Morning,

Bryant Thomas asked that I follow up with you regarding the Occoquan Policy Waiver Request that you submitted for the Nokesville PS and FM Rehabilitation Project. We have a few questions for you before we proceed:

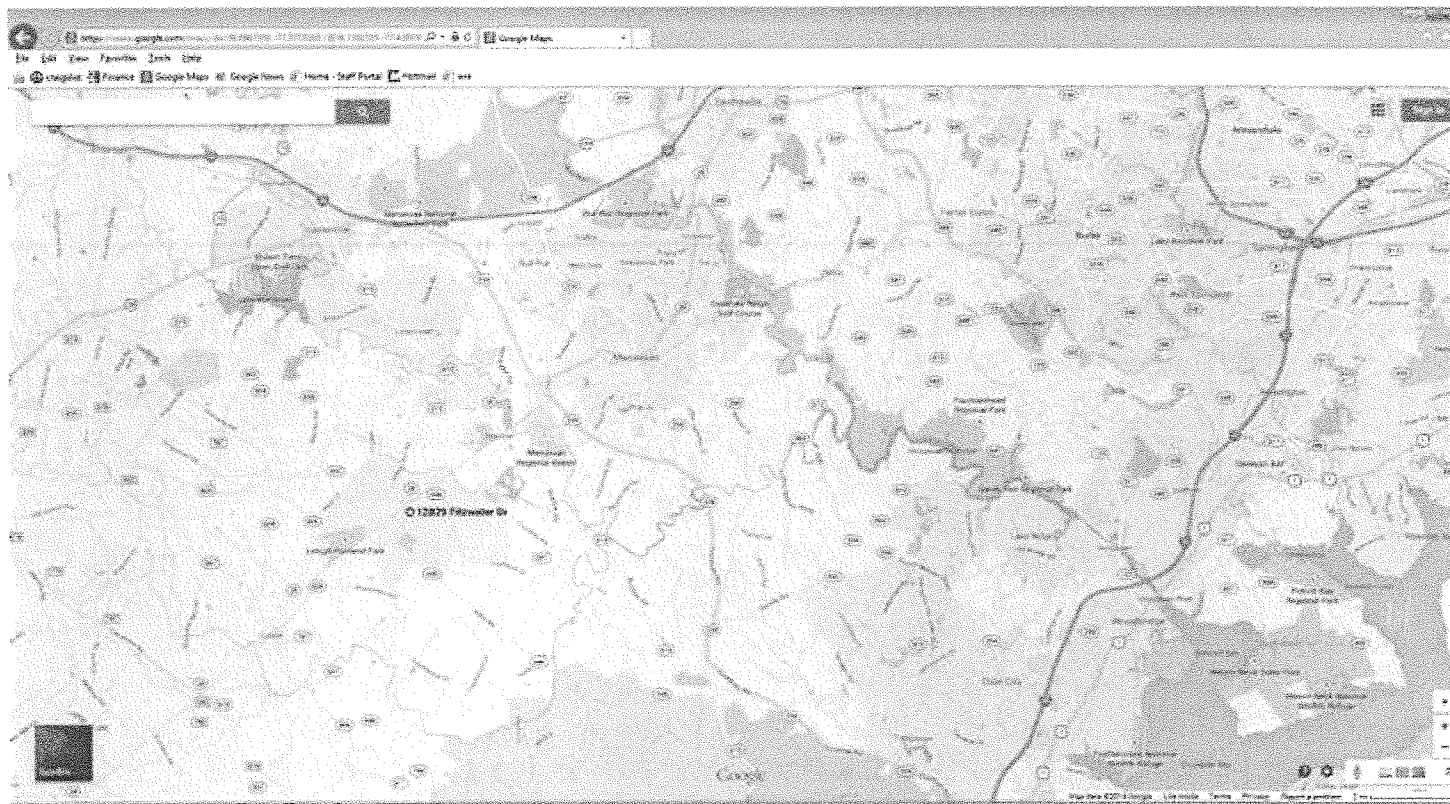
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18 gpm during the test period (10 am, Jan 4, 2011). Pump run times suggest an average flow of 10 to 15 gpm. No additional development or re-development is anticipated.

- 2) Is there any storage capacity currently at the PS or the ability to divert upstream flows to another PS? No.
- 3) Has there been any I&I work done in the collection system for this PS? No.
- 4) Could you provide a map with the location of the PS in relation to the Occoquan Reservoir?

I have attached a screen shot below – do you need a more formal submission?



If you have any questions regarding these questions, please feel free to contact me.

Regards,

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Sent: Friday, January 23, 2015 10:21 AM
To: Thompson, Alison (DEQ)
Cc: Etris, Robert
Subject: PWCSA Nokesville: Followup on request for Waiver for Occoquan Policy
Attachments: L20RUNS to DEQ 01232015.xlsx; 18450-000-C101-C-1.pdf

Hello Alison,

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Thanks for your help.

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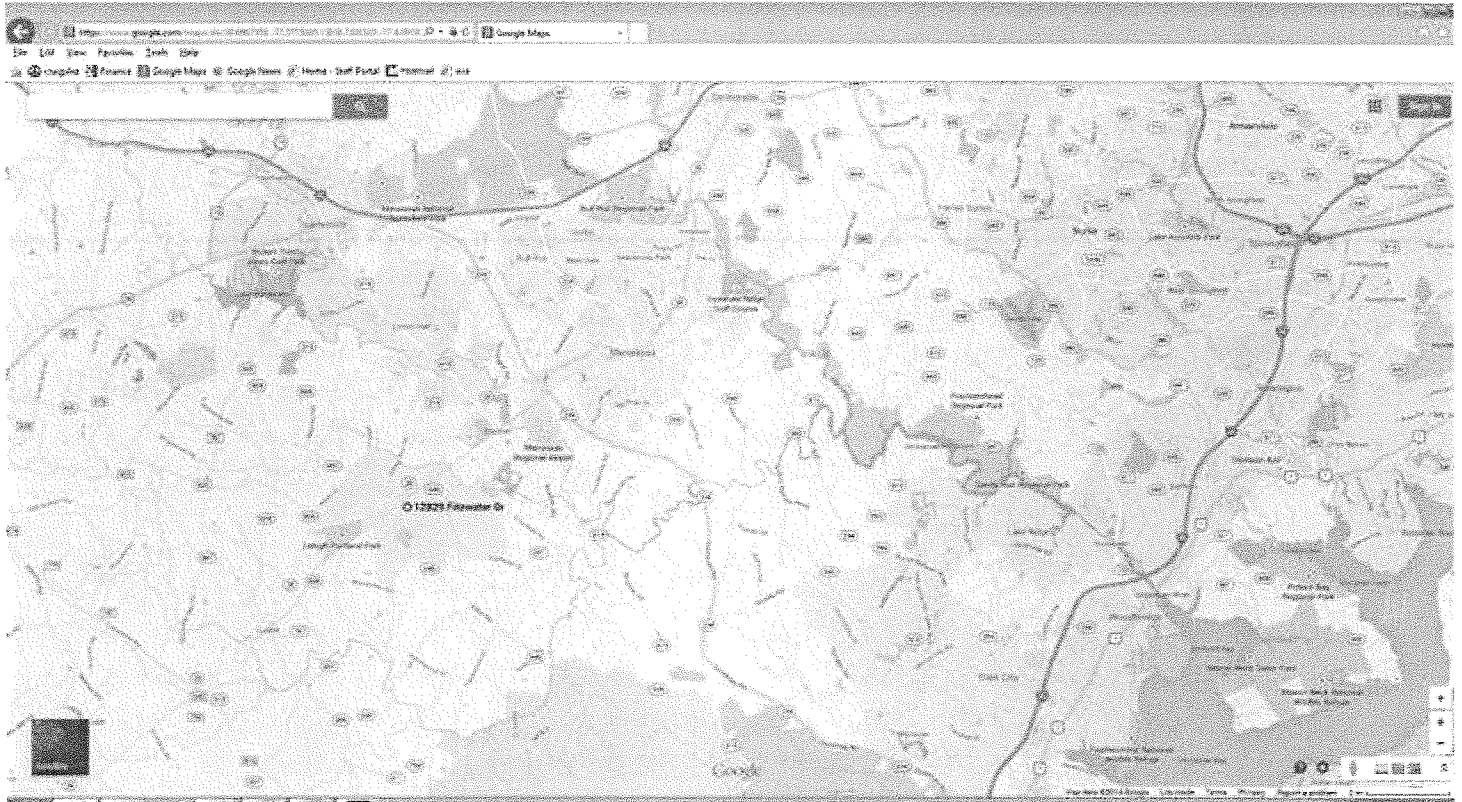
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If you have any questions regarding these questions, please feel free to contact me.

Regards,

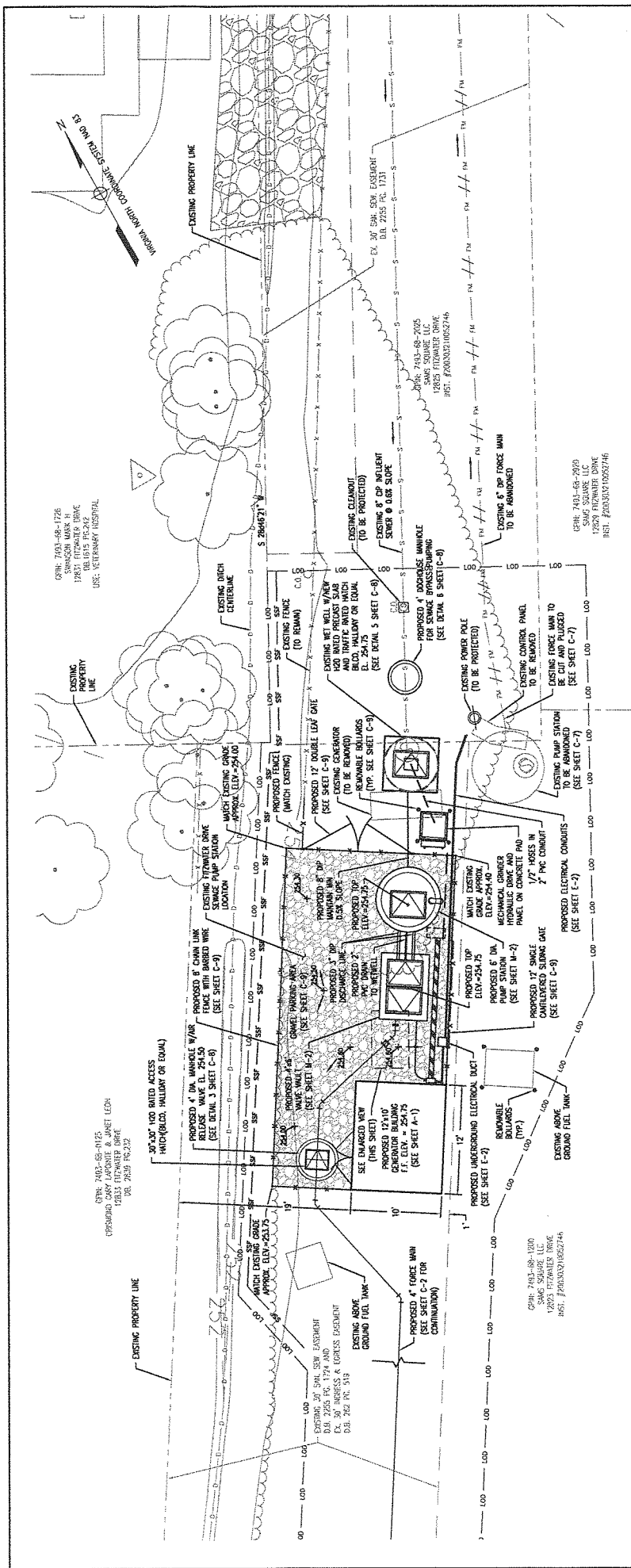
Alison Thompson
Water Permits Technical Reviewer
Virginia Dept of Environmental Quality
Northern Regional Office
13901 Crown Ct
Woodbridge, VA 22193
(703) 583-3834
alison.thompson@deq.virginia.gov

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WRA_Disclaimer_v20070222a

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SITE RUNOFF COEFFICIENTS

Land Use Type	Area	Runoff Coefficient	2 Year Rainfall Intensity	10 Year Rainfall Intensity	10 Year Storm Runoff	10 Year Storm Runoff
Impervious Surfaces (Hatches, Buildings, etc)	0.000 Acres	0.90	5.75 inch	7.27 inch	7.27 inch	0.00 CFS
Existing Computed Gravel	0.000 Acres	0.05	5.75 inch	7.27 inch	7.27 inch	0.00 CFS
Weighted Coefficient		0.05			0.00 CFS	0.00 CFS

Land Use Type	Area	Runoff Coefficient	2 Year Rainfall Intensity	10 Year Rainfall Intensity	10 Year Storm Runoff	10 Year Storm Runoff
Impervious Surfaces (Hatches, Buildings, etc)	0.000 Acres	0.90	5.75 inch	7.27 inch	7.27 inch	0.00 CFS
Gravel (57 Stone)	0.000 Acres	0.05	5.75 inch	7.27 inch	7.27 inch	0.00 CFS
Weighted Coefficient		0.05			0.00 CFS	0.00 CFS

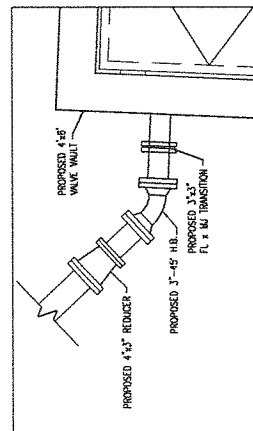
NOTES:

- COORDINATE WITH LANDOWNER TO RELOCATE ANY EXISTING MATERIALS.
- FOR EROSION AND SEDIMENT CONTROL, PLAN SEE SHEET C-5.
- TEST PIT EXISTING GROUND SURFACE TO CONFIRM INLET PROBE TO SHOP DRAWING SUBMITTAL.

SCALE: 1" = 5'

NAME	0	TOP ELEVATION	INVERT ELEVATION
WALKER WALL	V	254.75	248.00
PUMP STATION	PS	254.75	241.50
EXISTING WET WELL	EX. WW	254.75	246.00

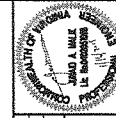
POINT #	LOCATION	NORTHING	EASTING
1	CUR 4" DIA. VALVE WALL	683013.63	11746124.84
2	CUR PROPOSED 6" DIA. PUMP STATION	6830121.77	11746122.80
3	CUR PROPOSED 4" DIA. WASTEWATER TREATMENT TANK	6830143.24	11746141.72
4	CUR BUILDING	6830090.53	11746115.84
5	CUR TOW AREA MANHOLE	6830101.86	11746106.28



SCALE: 1" = 1'-0"



Service Authority
Prince William County



REV	DATE	DESCRIPTION
1	JANUARY 2015	ISSUED FOR PERMIT

PRINCE WILLIAM COUNTY, VIRGINIA
SERVICE AUTHORITY

DATE	AS SHOWN	DATE	DATE
PROJECT NO.	117461	PROJECT NO.	117461
PROJECT NAME	117461	PROJECT NAME	117461
PROJECT LOCATION	117461	PROJECT LOCATION	117461

DATE

TIME

L20-PMP2-RS

L20-PMP1-RS

1=ON

1=ON

0=OFF

0=OFF

1-Jan-13	0:00:00	0.06		0.08
2-Jan-13	0:00:00	0.05		0.08
3-Jan-13	0:00:00	0.05		0.07
4-Jan-13	0:00:00	0.04		0.07
5-Jan-13	0:00:00	0.05		0.07
6-Jan-13	0:00:00	0.04		0.07
7-Jan-13	0:00:00	0.04		0.06
8-Jan-13	0:00:00	0.04		0.06
9-Jan-13	0:00:00	0.04		0.06
10-Jan-13	0:00:00	0.04		0.06
11-Jan-13	0:00:00	0.04		0.06
12-Jan-13	0:00:00	0.04		0.06
13-Jan-13	0:00:00	0.04		0.07
14-Jan-13	0:00:00	0.04		0.06
15-Jan-13	0:00:00	0.05		0.08
16-Jan-13	0:00:00	0.06	U	0.10 U
17-Jan-13	0:00:00	0.06	U	0.10 U
18-Jan-13	0:00:00	0.07		0.11
19-Jan-13	0:00:00	0.06		0.1
20-Jan-13	0:00:00	0.06		0.09
21-Jan-13	0:00:00	0.06		0.1
22-Jan-13	0:00:00	0.07		0.07
23-Jan-13	0:00:00	0.05		0.08
24-Jan-13	0:00:00	0.05		0.08
25-Jan-13	0:00:00	0.05		0.07
26-Jan-13	0:00:00	0.05		0.07
27-Jan-13	0:00:00	0.05		0.08
28-Jan-13	0:00:00	0.05		0.07
29-Jan-13	0:00:00	0.04		0.07
30-Jan-13	0:00:00	0.06		0.09
31-Jan-13	0:00:00	0.14		0.25
1-Feb-13	0:00:00	0.11		0.18
2-Feb-13	0:00:00	0.1		0.15
3-Feb-13	0:00:00	0.09		0.14
4-Feb-13	0:00:00	0.08		0.12
5-Feb-13	0:00:00	0.06		0.1
6-Feb-13	0:00:00	0.06		0.09
7-Feb-13	0:00:00	0.06		0.09
8-Feb-13	0:00:00	0.07		0.1
9-Feb-13	0:00:00	0.07		0.1
10-Feb-13	0:00:00	0.06		0.1

11-Feb-13	0:00:00	0.06	0.1
12-Feb-13	0:00:00	0.06	0.1
13-Feb-13	0:00:00	0.06	0.09

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 2

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

14-Feb-13	0:00:00	0.06	0.09
15-Feb-13	0:00:00	0.06	0.09
16-Feb-13	0:00:00	0.06	0.09
17-Feb-13	0:00:00	0.06	0.09
18-Feb-13	0:00:00	0.05	0.08
19-Feb-13	0:00:00	0.05	0.07
20-Feb-13	0:00:00	0.05	0.07
21-Feb-13	0:00:00	0.05	0.07
22-Feb-13	0:00:00	0.04	0.07
23-Feb-13	0:00:00	0.04	0.08
24-Feb-13	0:00:00	0.05	0.07
25-Feb-13	0:00:00	0.05	0.08
26-Feb-13	0:00:00	0.06	0.09
27-Feb-13	0:00:00	0.08	0.13
28-Feb-13	0:00:00	0.08	0.12
1-Mar-13	0:00:00	0.07	0.11
2-Mar-13	0:00:00	0.07	0.11
3-Mar-13	0:00:00	0.18 U	0.08 U
4-Mar-13	0:00:00	0.06	0.09
5-Mar-13	0:00:00	0.05	0.08
6-Mar-13	0:00:00	0.07	0.12
7-Mar-13	0:00:00	0.12	0.22
8-Mar-13	0:00:00	0.11	0.19
9-Mar-13	0:00:00	0.1	0.17
10-Mar-13	0:00:00	0.09	0.15
11-Mar-13	0:00:00	0.08	0.13
12-Mar-13	0:00:00	0.11	0.2
13-Mar-13	0:00:00	0.11	0.18
14-Mar-13	0:00:00	0.1	0.16
15-Mar-13	0:00:00	0.09	0.14
16-Mar-13	0:00:00	0.08	0.12
17-Mar-13	0:00:00	0.08	0.11
18-Mar-13	0:00:00	0.08	0.11
19-Mar-13	0:00:00	0.08	0.13
20-Mar-13	0:00:00	0.08	0.12
21-Mar-13	0:00:00	0.07	0.11
22-Mar-13	0:00:00	0.06	0.09
23-Mar-13	0:00:00	0.04 U	0.05 U

24-Mar-13	0:00:00	0.00	U	0.00	U
25-Mar-13	0:00:00	0.05	U	0.07	U
26-Mar-13	0:00:00			0.07	0.11
27-Mar-13	0:00:00			0.07	0.1
28-Mar-13	0:00:00			0.07	0.1
29-Mar-13	0:00:00			0.06	0.09

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 3

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

30-Mar-13	0:00:00		0.06	0.09
31-Mar-13	0:00:00		0.06	0.09
1-Apr-13	0:00:00		0.06	0.09
2-Apr-13	0:00:00		0.06	0.09
3-Apr-13	0:00:00		0.05	0.07
4-Apr-13	0:00:00		0.05	0.08
5-Apr-13	0:00:00		0.07	0.09
6-Apr-13	0:00:00		0.06	0.08
7-Apr-13	0:00:00		0.06	0.08
8-Apr-13	0:00:00		0.06	0.08
9-Apr-13	0:00:00		0.05	0.06
10-Apr-13	0:00:00		0.05	0.08
11-Apr-13	0:00:00		0.06	0.08
12-Apr-13	0:00:00		0.06	0.08
13-Apr-13	0:00:00		0.07	0.09
14-Apr-13	0:00:00		0.06	0.08
15-Apr-13	0:00:00		0.05	0.07
16-Apr-13	0:00:00		0.06	0.08
17-Apr-13	0:00:00		0.06	0.08
18-Apr-13	0:00:00		0.06	0.08
19-Apr-13	0:00:00		0.07	0.09
20-Apr-13	0:00:00		0.07	0.1
21-Apr-13	0:00:00		0.06	0.08
22-Apr-13	0:00:00		0.06	0.08
23-Apr-13	0:00:00		0.06	0.09
24-Apr-13	0:00:00		0.06	0.09
25-Apr-13	0:00:00		0.06	0.08
26-Apr-13	0:00:00		0.05	0.07
27-Apr-13	0:00:00		0.05	0.07
28-Apr-13	0:00:00		0.05	0.07
29-Apr-13	0:00:00		0.05	0.07
30-Apr-13	0:00:00		0.06	0.09
1-May-13	0:00:00		0.05	0.07
2-May-13	0:00:00		0.05	0.07
3-May-13	0:00:00		0.06	0.07

4-May-13	0:00:00	0.05	0.08
5-May-13	0:00:00	0.05	0.07
6-May-13	0:00:00	0.04	0.06
7-May-13	0:00:00	0.08	0.11
8-May-13	0:00:00	0.1	0.15
9-May-13	0:00:00	0.1	0.15
10-May-13	0:00:00	0.09	0.12
11-May-13	0:00:00	0.1	0.15
12-May-13	0:00:00	0.1 0.13	

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 4

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

13-May-13	0:00:00	0.09	0.12
14-May-13	0:00:00	0.08	0.12
15-May-13	0:00:00	0.08	0.11
16-May-13	0:00:00	0.07	0.1
17-May-13	0:00:00	0.06	0.08
18-May-13	0:00:00	0.06	0.08
19-May-13	0:00:00	0.06	0.08
20-May-13	0:00:00	0.06 U 0.09 U	
21-May-13	0:00:00	0.06	0.08
22-May-13	0:00:00	0.06	0.07
23-May-13	0:00:00	0.06	0.07
24-May-13	0:00:00	0.06	0.08
25-May-13	0:00:00	0.05	0.07
26-May-13	0:00:00	0.05	0.07
27-May-13	0:00:00	0.05	0.07
28-May-13	0:00:00	0.05	0.07
29-May-13	0:00:00	0.05	0.06
30-May-13	0:00:00	0.04	0.06
31-May-13	0:00:00	0.04	0.06
1-Jun-13	0:00:00	0.05	0.06
2-Jun-13	0:00:00	0.05	0.06
3-Jun-13	0:00:00	0.05	0.06
4-Jun-13	0:00:00	0.05	0.06
5-Jun-13	0:00:00	0.05	0.06
6-Jun-13	0:00:00	0.05	0.06
7-Jun-13	0:00:00	0.1	0.14
8-Jun-13	0:00:00	0.1	0.13
9-Jun-13	0:00:00	0.09	0.12
10-Jun-13	0:00:00	0.29	0.24
11-Jun-13	0:00:00	1	0.35
12-Jun-13	0:00:00	0.74	0.24
13-Jun-13	0:00:00	0.09	0.14

14-Jun-13	0:00:00	0.08	0.12
15-Jun-13	0:00:00	0.07	0.1
16-Jun-13	0:00:00	0.07	0.1
17-Jun-13	0:00:00	0.06	0.09
18-Jun-13	0:00:00	0.06	0.09
19-Jun-13	0:00:00	0.06	0.09
20-Jun-13	0:00:00	0.06	0.08
21-Jun-13	0:00:00	0.05	0.07
22-Jun-13	0:00:00	0.05	0.07
23-Jun-13	0:00:00	0.06	0.08
24-Jun-13	0:00:00	0.07	0.09
25-Jun-13	0:00:00	0.06	0.08

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 5

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

26-Jun-13	0:00:00	0.06	0.08
27-Jun-13	0:00:00	0.05	0.06
28-Jun-13	0:00:00	0.05	0.07
29-Jun-13	0:00:00	0.06	0.08
30-Jun-13	0:00:00	0.06	0.08
1-Jul-13	0:00:00	0.06	0.08
2-Jul-13	0:00:00	0.05	0.08
3-Jul-13	0:00:00	0.1	0.15
4-Jul-13	0:00:00	0.1	0.13
5-Jul-13	0:00:00	0.08	0.11
6-Jul-13	0:00:00	0.07	0.09
7-Jul-13	0:00:00	0.05	0.08
8-Jul-13	0:00:00	0.06	0.08
9-Jul-13	0:00:00	0.06	0.08
10-Jul-13	0:00:00	0.07	0.09
11-Jul-13	0:00:00	0.08	0.11
12-Jul-13	0:00:00	0.21	0.39
13-Jul-13	0:00:00	0.14	0.22
14-Jul-13	0:00:00	0.1	0.16
15-Jul-13	0:00:00	0.09	0.13
16-Jul-13	0:00:00	0.08 U	0.12 U
17-Jul-13	0:00:00	0.07	0.09
18-Jul-13	0:00:00	0.06	0.09
19-Jul-13	0:00:00	0.06	0.08
20-Jul-13	0:00:00	0.05	0.07
21-Jul-13	0:00:00	0.05	0.07
22-Jul-13	0:00:00	0.05	0.07
23-Jul-13	0:00:00	0.05	0.07
24-Jul-13	0:00:00	0.05	0.07

25-Jul-13	0:00:00	0.05		0.06
26-Jul-13	0:00:00	0.05		0.07
27-Jul-13	0:00:00	0.05		0.06
28-Jul-13	0:00:00	0.06		0.08
29-Jul-13	0:00:00	0.05		0.07
30-Jul-13	0:00:00	0.05		0.07
31-Jul-13	0:00:00	0.05		0.07
1-Aug-13	0:00:00	0.05	U	0.07 U
2-Aug-13	0:00:00	0.05		0.07
3-Aug-13	0:00:00	0.06		0.08
4-Aug-13	0:00:00	0.05		0.07
5-Aug-13	0:00:00	0.05		0.07
6-Aug-13	0:00:00	0.05		0.07
7-Aug-13	0:00:00	0.05		0.07
8-Aug-13	0:00:00	0.04	0.06	

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 6

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

9-Aug-13	0:00:00	0.04		0.06
10-Aug-13	0:00:00	0.05		0.06
11-Aug-13	0:00:00	0.04		0.06
12-Aug-13	0:00:00	0.04		0.06
13-Aug-13	0:00:00	0.05		0.06
14-Aug-13	0:00:00	0.05		0.07
15-Aug-13	0:00:00	0.04		0.06
16-Aug-13	0:00:00	0.04		0.06
17-Aug-13	0:00:00	0.04		0.06
18-Aug-13	0:00:00	0.05		0.07
19-Aug-13	0:00:00	0.04		0.05
20-Aug-13	0:00:00	0.04		0.06
21-Aug-13	0:00:00	0.04		0.06
22-Aug-13	0:00:00	0.04		0.06
23-Aug-13	0:00:00	0.05		0.06
24-Aug-13	0:00:00	0.04		0.06
25-Aug-13	0:00:00	0.04		0.06
26-Aug-13	0:00:00	0.04		0.06
27-Aug-13	0:00:00	0.04		0.06
28-Aug-13	0:00:00	0.04		0.05
29-Aug-13	0:00:00	0.07	0.05 U	
30-Aug-13	0:00:00	0.04		0.05
31-Aug-13	0:00:00	0.04		0.05
1-Sep-13	0:00:00	0.04		0.05
2-Sep-13	0:00:00	0.04		0.06
3-Sep-13	0:00:00	0.04		0.06

4-Sep-13	0:00:00	0.04	0.05
5-Sep-13	0:00:00	0.05	0.07
6-Sep-13	0:00:00	0.04	0.06
7-Sep-13	0:00:00	0.04	0.05
8-Sep-13	0:00:00	0.04	0.06
9-Sep-13	0:00:00	0.04	0.05
10-Sep-13	0:00:00	0.04	0.06
11-Sep-13	0:00:00	0.04	0.06
12-Sep-13	0:00:00	0.05	0.07
13-Sep-13	0:00:00	0.04	0.05
14-Sep-13	0:00:00	0.04	0.05
15-Sep-13	0:00:00	0.04	0.05
16-Sep-13	0:00:00	0.04	0.05
17-Sep-13	0:00:00 0.26	U 0.04	U
18-Sep-13	0:00:00	0.04	0.05
19-Sep-13	0:00:00 0.02	U 0.03	U
20-Sep-13	0:00:00 0.02	U 0.03	U
21-Sep-13	0:00:00	0.04 0.06	

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 7

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

22-Sep-13	0:00:00	0.05	0.07
23-Sep-13	0:00:00	0.04	0.06
24-Sep-13	0:00:00	0.03	0.05
25-Sep-13	0:00:00	0.04	0.06
26-Sep-13	0:00:00	0.04	0.06
27-Sep-13	0:00:00	0.04	0.06
28-Sep-13	0:00:00	0.03	0.05
29-Sep-13	0:00:00	0.04	0.07
30-Sep-13	0:00:00	0.04	0.06
1-Oct-13	0:00:00	0.04	0.05
2-Oct-13	0:00:00	0.04	0.07
3-Oct-13	0:00:00	0.05	0.06
4-Oct-13	0:00:00	0.04	0.06
5-Oct-13	0:00:00	0.04	0.06
6-Oct-13	0:00:00	0.04	0.06
7-Oct-13	0:00:00	0.05	0.07
8-Oct-13	0:00:00	0.04	0.07
9-Oct-13	0:00:00	0.04	0.06
10-Oct-13	0:00:00	0.06	0.1
11-Oct-13	0:00:00	0.09	0.14
12-Oct-13	0:00:00	0.09	0.13
13-Oct-13	0:00:00	0.09	0.13
14-Oct-13	0:00:00	0.08	0.11

15-Oct-13	0:00:00	0.06	0.08
16-Oct-13	0:00:00	0.05	0.08
17-Oct-13	0:00:00	0.06	0.07
18-Oct-13	0:00:00	0.05	0.06
19-Oct-13	0:00:00	0.05	0.06
20-Oct-13	0:00:00	0.06	0.07
21-Oct-13	0:00:00	0.05	0.05
22-Oct-13	0:00:00	0.05	0.05
23-Oct-13	0:00:00	0.04	0.05
24-Oct-13	0:00:00	0.04	0.05
25-Oct-13	0:00:00	0.04	0.05
26-Oct-13	0:00:00	0.05	0.05
27-Oct-13	0:00:00	0.05	0.06
28-Oct-13	0:00:00	0.05	0.05
29-Oct-13	0:00:00	0.04	0.05
30-Oct-13	0:00:00	0.05	0.05
31-Oct-13	0:00:00	0.04	0.05
1-Nov-13	0:00:00	0.05	0.05
2-Nov-13	0:00:00	0.05	0.05
3-Nov-13	0:00:00	0.05	0.05
4-Nov-13	0:00:00	0.04	0.05

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 8

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

5-Nov-13	0:00:00	0.05	0.05
6-Nov-13	0:00:00	0.04	0.04
7-Nov-13	0:00:00	0.04	0.05
8-Nov-13	0:00:00	0.04	0.05
9-Nov-13	0:00:00	0.05	0.06
10-Nov-13	0:00:00	0.04	0.05
11-Nov-13	0:00:00	0.04	0.05
12-Nov-13	0:00:00	0.04	0.05
13-Nov-13	0:00:00	0.06	0.04
14-Nov-13	0:00:00	0.05	0.04
15-Nov-13	0:00:00	0.04	0.04
16-Nov-13	0:00:00	0.04	0.07
17-Nov-13	0:00:00	0.04	0.06
18-Nov-13	0:00:00	0.05	0.06
19-Nov-13	0:00:00	0.04	0.08
20-Nov-13	0:00:00	0.03	0.07
21-Nov-13	0:00:00	0.04	0.05
22-Nov-13	0:00:00	0.04	0.05
23-Nov-13	0:00:00	0.05	0.05
24-Nov-13	0:00:00	0.05	0.05

25-Nov-13	0:00:00	0.05	0.05
26-Nov-13	0:00:00	0.08	0.09
27-Nov-13	0:00:00	0.19	0.21
28-Nov-13	0:00:00	0.13	0.14
29-Nov-13	0:00:00	0.09	0.11
30-Nov-13	0:00:00	0.08	0.09
1-Dec-13	0:00:00	0.08	0.09
2-Dec-13	0:00:00	0.07	0.08
3-Dec-13	0:00:00	0.07	0.07
4-Dec-13	0:00:00	0.06	0.07
5-Dec-13	0:00:00	0.06	0.07
6-Dec-13	0:00:00	0.08	0.09
7-Dec-13	0:00:00	0.14	0.16
8-Dec-13	0:00:00	0.11	0.12
9-Dec-13	0:00:00	0.19 U	0.22 U
10-Dec-13	0:00:00	0.18	0.21
11-Dec-13	0:00:00	0.16	0.18
12-Dec-13	0:00:00	0.13	0.14
13-Dec-13	0:00:00	0.11	0.12
14-Dec-13	0:00:00	0.12	0.13
15-Dec-13	0:00:00	0.15	0.16
16-Dec-13	0:00:00	0.14	0.15
17-Dec-13	0:00:00	0.12	0.13
18-Dec-13	0:00:00	0.11 0.11	

PRP L20-PMP

2-RS /FL= L20RUNS.TXT Page 9

Profile Report 5/29/2014 15:59

DATE

TIME L20-PMP2-RS L20-PMP1-RS

1=ON 1=ON

0=OFF 0=OFF

19-Dec-13	0:00:00	0.1	0.11
20-Dec-13	0:00:00	0.09	0.1
21-Dec-13	0:00:00	0.09	0.1
22-Dec-13	0:00:00	0.1	0.11
23-Dec-13	0:00:00	0.17	0.17
24-Dec-13	0:00:00	0.16	0.18
25-Dec-13	0:00:00	0.12	0.13
26-Dec-13	0:00:00	0.11	0.12
27-Dec-13	0:00:00	0.1	0.11
28-Dec-13	0:00:00	0.1	0.11
29-Dec-13	0:00:00	0.2	0.22
30-Dec-13	0:00:00	0.2	0.22
31-Dec-13	0:00:00	0.15 0.16	

Thompson, Alison (DEQ)

From: Malik, Junaid [jmalik@wrallp.com]
Sent: Thursday, January 22, 2015 2:32 PM
To: Thompson, Alison (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Thanks Alison.

Junaid.

Sent from my T-Mobile 4G LTE Device

----- Original message -----

From: "Thompson, Alison (DEQ)"
Date: 01/22/2015 2:30 PM (GMT-05:00)
To: "Malik, Junaid"
Cc: "Thompson, Alison (DEQ)"
Subject: RE: Occoquan Policy Waiver Request

I have been in meetings most of today, but have received your email and your phone message. I will be in touch tomorrow.

Alison Thompson
Water Permits Technical Reviewer
Virginia Dept of Environmental Quality
Northern Regional Office
13901 Crown Ct
Woodbridge, VA 22193
(703) 583-3834
alison.thompson@deq.virginia.gov

From: Malik, Junaid [mailto:jmalik@wrallp.com]
Sent: Thursday, January 22, 2015 10:36 AM
To: Thompson, Alison (DEQ)
Subject: FW: Occoquan Policy Waiver Request

Hello Alison,

Hope you are doing well.

The Nokesville PS underwent some design changes since your last communication with Mr. Darrin Geldert back in April 2014. Darrin left our firm in late September 2014.

There has been a slight revision to the plan since the last communication. Do you have some time to talk about this project?

Thanks,

Junaid Malik, P.E., CFM | *Senior Project Engineer*

Whitman, Requardt & Associates, LLP

3701 Pender Drive
Fairfax, VA 20171
(Direct) 703.293.7405
(Main) 703.221.9717



Whitman, Reuquardt & Associates, LLP

1915 100 YEARS 2015

jmalik@wrallp.com

www.wrallp.com

From: Geldert, Darrin
Sent: Thursday, April 24, 2014 9:48 AM
To: 'Thompson, Alison (DEQ)'
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Alison,

I am working on a review of flow data. The station is not metered and we are reviewing pump run times. The pump station design point is 53 gpm, this is more than 2.5 times the flow estimated at the station in the PER.

There is no growth anticipated in the service area.

I have attached a map from the PWC GIS Mapper with the local drainages labeled. It appears the site drains south towards Slate Run, in what PWC has labeled the Cedar Run Watershed.

Darrin

Darrin Geldert P.E. | *Associate*
Whitman, Reuquardt & Associates, LLP
3701 Pender Dr. Suite 450
Fairfax, VA 22030
703.293.7403 (Direct)
703.293.9717 (Main)
703.273.6773 (Fax)

dgeldert@wrallp.com
www.wrallp.com

From: Thompson, Alison (DEQ) [<mailto:Alison.Thompson@deq.virginia.gov>]
Sent: Wednesday, April 23, 2014 8:31 AM
To: Geldert, Darrin
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ); Thompson, Alison (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Darrin,

If possible, we would like some more information on the existing and proposed design flows (average and peak) of this pump station. Also, is there any information on the observed maximum flows at the pump station?

The map is a bit difficult to read, so can you tell me the proximity of any streams or unnamed tributaries near the pump station?

Thank you,

Alison Thompson
Water Permits Technical Reviewer
Virginia Dept of Environmental Quality
Northern Regional Office
13901 Crown Ct
Woodbridge, VA 22193
(703) 583-3834
alison.thompson@deq.virginia.gov

From: Geldert, Darrin [<mailto:dgeldert@wrallp.com>]
Sent: Tuesday, April 15, 2014 8:03 AM
To: Thompson, Alison (DEQ)
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Morning Alison,

Let me know if you need more information – I have included replies below.

Darrin

Darrin Geldert P.E. | *Associate*
Whitman, Requardt & Associates, LLP
3701 Pender Dr. Suite 450
Fairfax, VA 22030
703.293.7403 (Direct)
703.293.9717 (Main)
703.273.6773 (Fax)

dgeldert@wrallp.com
www.wrallp.com

From: Thompson, Alison (DEQ) [<mailto:Alison.Thompson@deq.virginia.gov>]
Sent: Tuesday, April 15, 2014 6:40 AM
To: Geldert, Darrin
Cc: rtatariw@pwcsa.org; Thompson, Alison (DEQ)
Subject: Occoquan Policy Waiver Request

Good Morning,

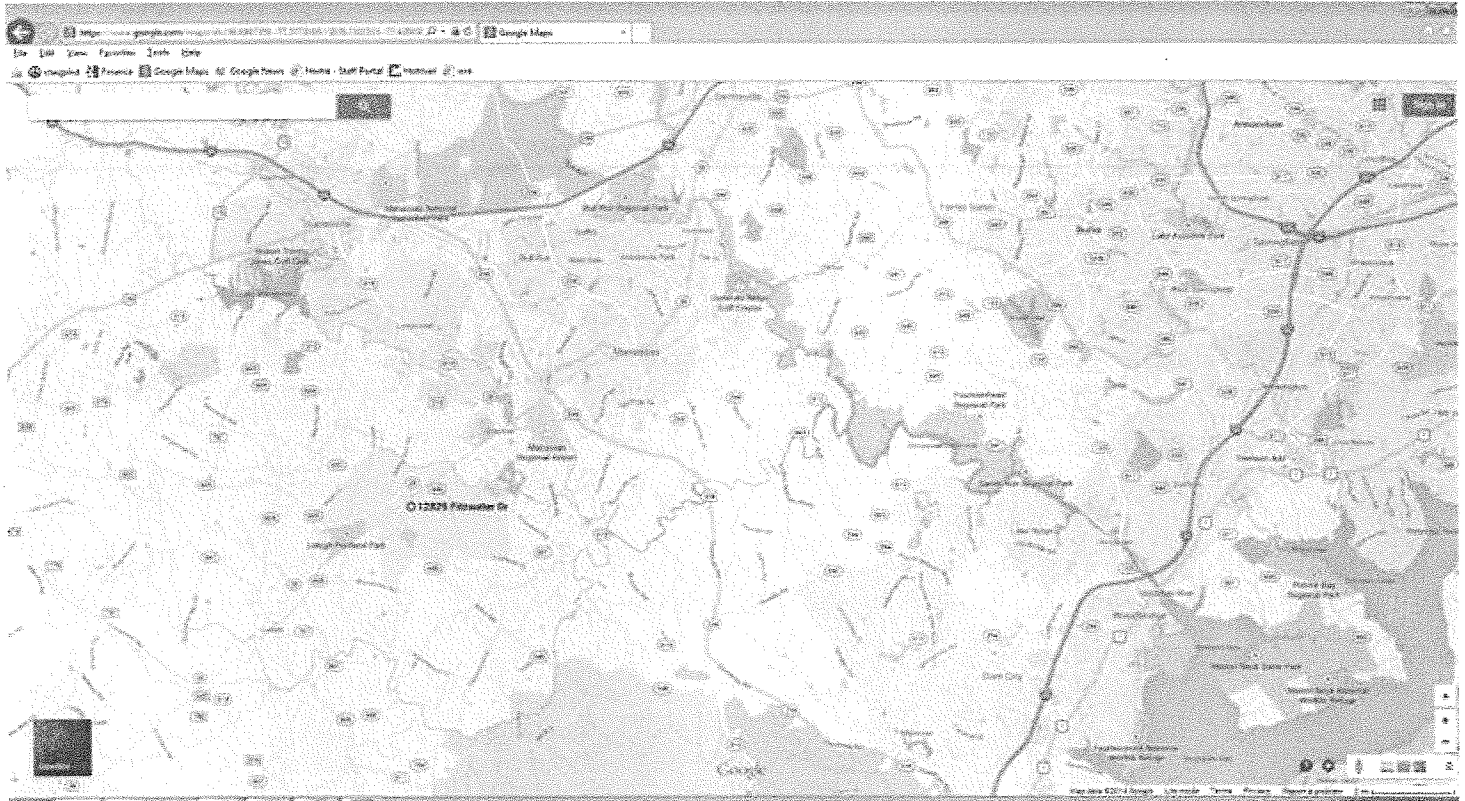
Bryant Thomas asked that I follow up with you regarding the Occoquan Policy Waiver Request that you submitted for the Nokesville PS and FM Rehabilitation Project. We have a few questions for you before we proceed:

- 1) Could you please tell us the average daily and maximum daily design flows for the PS as well as the actual current flows during the past year?

The pump station does not have a flow meter. Flows are estimated based on drawdown tests and pump run time recorders. In 2011 a drawdown test was completed. Pump rate was recorded at 76 gpm and the average inflow was 18 gpm during the test period (10 am, Jan 4, 2011). Pump run times suggest an average flow of 10 to 15 gpm. No additional development or re-development is anticipated.

- 2) Is there any storage capacity currently at the PS or the ability to divert upstream flows to another PS? **No.**
- 3) Has there been any I&I work done in the collection system for this PS? **No.**
- 4) Could you provide a map with the location of the PS in relation to the Occoquan Reservoir?

I have attached a screen shot below – do you need a more formal submission?



If you have any questions regarding these questions, please feel free to contact me.

Regards,

Alison Thompson
Water Permits Technical Reviewer
Virginia Dept of Environmental Quality
Northern Regional Office
13901 Crown Ct
Woodbridge, VA 22193
(703) 583-3834
alison.thompson@deq.virginia.gov

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Thompson, Alison (DEQ)

From: Thompson, Alison (DEQ)
Sent: Wednesday, April 23, 2014 8:31 AM
To: Geldert, Darrin
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ); Thompson, Alison (DEQ)
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Thank you,

Alison Thompson
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Virginia Dept of Environmental Quality
Northern Regional Office
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alison.thompson@deq.virginia.gov

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Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ)
Subject: RE: Occoquan Policy Waiver Request

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Darrin

Darrin Geldert P.E. | *Associate*
Whitman, Requardt & Associates, LLP
3701 Pender Dr. Suite 450
Fairfax, VA 22030
703.293.7403 (Direct)
703.293.9717 (Main)
703.273.6773 (Fax)

dgeldert@wrallp.com
www.wrallp.com

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Sent: Tuesday, April 15, 2014 6:40 AM

To: Geldert, Darrin
Cc: rtatariw@pwcsa.org; Thompson, Alison (DEQ)
Subject: Occoquan Policy Waiver Request

Good Morning,

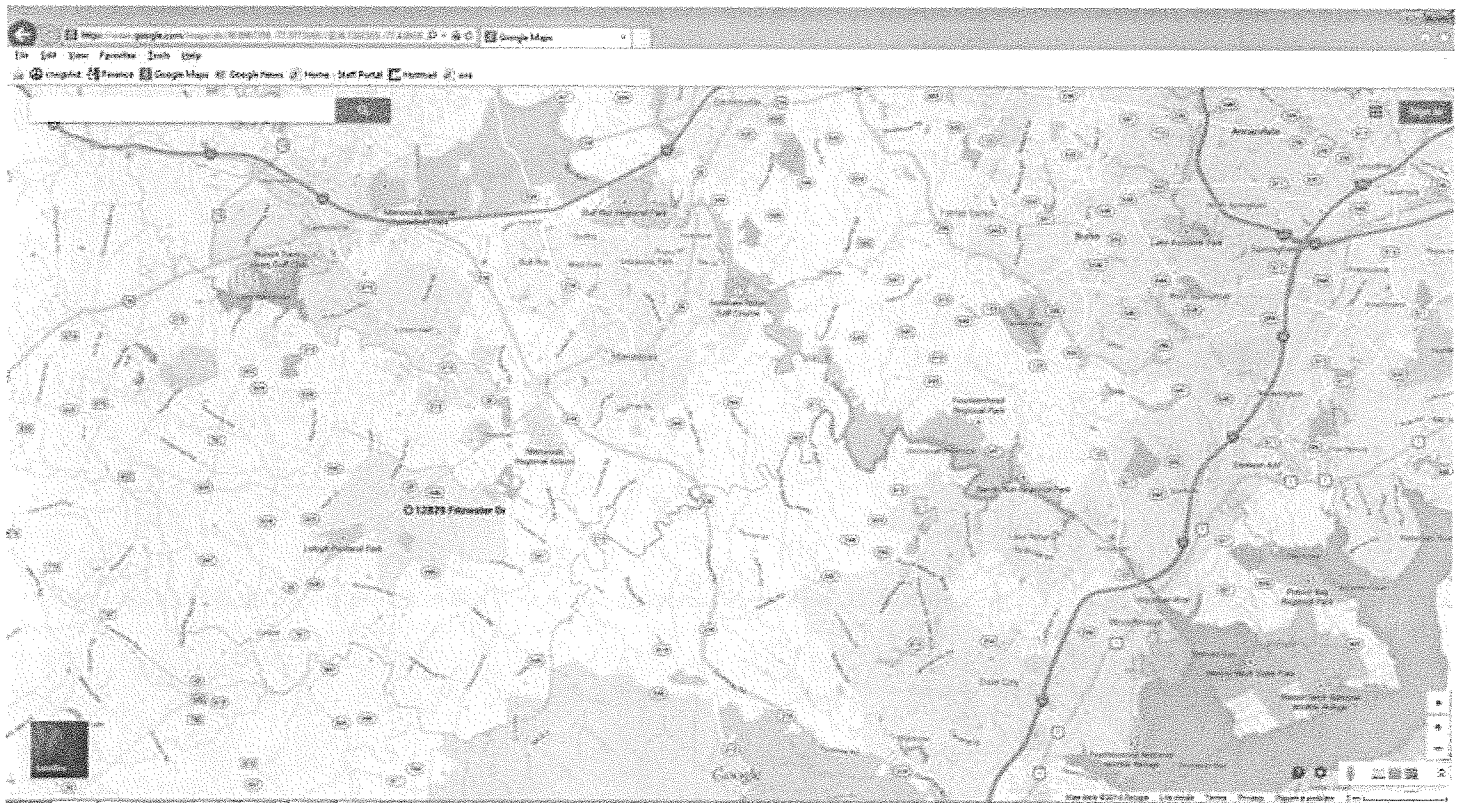
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Regards,

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Woodbridge, VA 22193

(703) 583-3834

alison.thompson@deq.virginia.gov

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Thompson, Alison (DEQ)

From: Geldert, Darrin [dgeldert@wrallp.com]
Sent: Tuesday, April 15, 2014 8:03 AM
To: Thompson, Alison (DEQ)
Cc: rtatariw@pwcsa.org; Robert Jenkins (Jenkins@pwcsa.org); Thomas, Bryant (DEQ)
Subject: RE: Occoquan Policy Waiver Request

Morning Alison,

Let me know if you need more information – I have included replies below.

Darrin

Darrin Geldert P.E. | *Associate*

Whitman, Requardt & Associates, LLP

3701 Pender Dr. Suite 450

Fairfax, VA 22030

703.293.7403 (Direct)

703.293.9717 (Main)

703.273.6773 (Fax)

dgeldert@wrallp.com

www.wrallp.com

From: Thompson, Alison (DEQ) [mailto:Alison.Thompson@deq.virginia.gov]
Sent: Tuesday, April 15, 2014 6:40 AM
To: Geldert, Darrin
Cc: rtatariw@pwcsa.org; Thompson, Alison (DEQ)
Subject: Occoquan Policy Waiver Request

Good Morning,

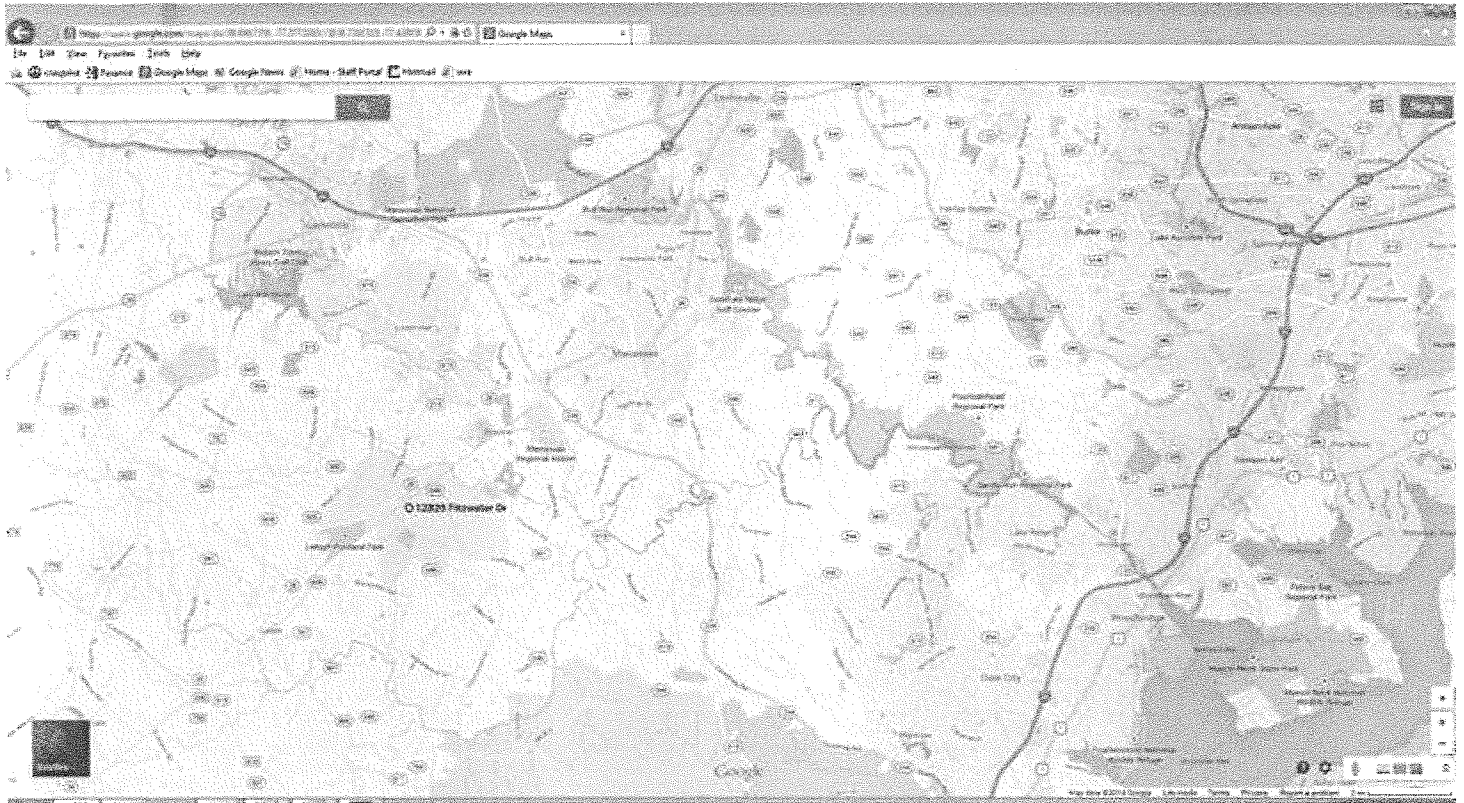
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I have attached a screen shot below – do you need a more formal submission?



If you have any questions regarding these questions, please feel free to contact me.

Regards,

Alison Thompson
Water Permits Technical Reviewer
Virginia Dept of Environmental Quality
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(703) 583-3834
alison.thompson@deq.virginia.gov

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Thompson, Alison (DEQ)

From: Thomas, Bryant (DEQ)
Sent: Tuesday, March 25, 2014 7:38 PM
To: Thompson, Alison (DEQ)
Subject: FW: Occoquan Policy Waiver Request - PWCSA, WR&A
Attachments: PWCSA Nokesville PS Waiver Request.pdf

A,

Would you take the lead on reviewing this request. Let's plan to touch base and discuss.

-B

From: Geldert, Darrin [<mailto:dgeldert@wrallp.com>]
Sent: Tuesday, March 25, 2014 2:56 PM
To: Thomas, Bryant (DEQ)
Cc: Nicely, Catherine (DEQ); rtatariw@pwcsa.org; George DiCarlo
Subject: Occoquan Policy Waiver Request - PWCSA, WR&A

Mr Thomas,

Whitman, Requardt and Associates, LLP (WR&A) on behalf of the Prince William County Service Authority (PWCSA) is requesting a waiver from the Occoquan Watershed Long Range Policy regarding a retention basin. PWCSA is requesting a waiver from the requirements identified in the subsection for the following reasons:

1. The pump station is existing and was constructed as part of the sewer collection system in the late 1960's. The construction of this station predates the Occoquan policy.
2. The pump station site is in a very small easement and there is no room to add a retention basin.
3. The pump station is being refurbished including improved site security, new pumps, new generator, electrical and instrumentation equipment improvements.
4. The new pumps have a design point more than 2.5x's the design peak flow. This will accommodate any possible increase in flow due to Infiltration/Inflow in the collection system. In addition, PWCSA does not anticipate any growth in the basin.
5. The pump station design includes standby pumping units.
6. The pump station design includes a generator to serve as an "on-site" backup power supply.

If there are any questions or if additional information is required please do not hesitate to call or email.

Sincerely,

Darrin

Darrin Geldert P.E. | *Associate*
Whitman, Requardt & Associates, LLP
3701 Pender Dr. Suite 450
Fairfax, VA 22030
703.293.7403 (Direct)
703.293.9717 (Main)
703.273.6773 (Fax)

dgeldert@wrallp.com

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WAIVER REQUEST

Date: March 25, 2014	
To: Mr. Bryant Thomas Water Permit and Planning Manager Virginia Department Of Environmental Quality (DEQ) 13901 Crown Court, Woodbridge, VA 22193	Work Order Number: 18450-000
From: Darrin Geldert Whitman, Requardt and Associates, LLP.	Client: Prince William County Service Authority (PWCSA)
Subject: Waiver Request for Nokesville Sewage Pumping Station from Virginia Administrative Code 9VAC25-410-20, subdivision E-5-g – Occoquan Watershed Long Range Policy.	Project: Nokesville Sewage Pumping Station and Force Main Rehabilitation

Code States:

9VAC25-410-20 Long Range Policy.

E. Plant performance requirements.

5. Pumping Stations on the collection system which are located in the Occoquan watershed and are tributary to regional treatment works shall:

g. Have retention basins of a minimum one-day capacity.

If these pumping stations are remote and unmanned, an alarm system shall be provided at manned stations to indicate that problems are developing and to direct maintenance assistance to the affected pumping station. The owner of each pumping station shall be required to obtain a State Water Control Board certificate.

A waiver may be sought from requirement g above, particularly in new collection systems exhibiting no I/I problems. However, the jurisdiction requesting such a waiver must submit documentation to the board for review that the sewer system tributary to the pump station meets the criteria established by the most recent edition of the Virginia Sewerage Regulations for infiltration/inflow, and any other such information that the board may require.

Reason for Waiver Request:

PWCSA is requesting a waiver from the requirements identified in the subsection for the following reasons:

1. The pump station is existing and was constructed as part of the sewer collection system in the late 1960's. The construction of this station predates the Occoquan policy.
2. The pump station site is in a very small easement and there is no room to add a retention basin.

3701 Pender Drive, Suite 450, Fairfax, Virginia 22030 www.wrallp.com Phone: 703.293.9717 Fax: 703.273.6773

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Blacksburg, VA • Fairfax, VA • Fredericksburg, VA • Lynchburg, VA • Newport News, VA • Richmond, VA • Virginia Beach, VA

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March 25, 2014

Page 2

18450-000

3. The pump station is being refurbished including improved site security, new pumps, new generator, electrical and instrumentation equipment improvements.
4. The new pumps have a design point more than 2.5x's the design peak flow. This will accommodate any possible increase in flow due to Infiltration/Inflow in the collection system. In addition, PWCSA does not anticipate any growth in the basin.
5. The pump station design includes standby pumping units.
6. The pump station design includes a generator to serve as an "on-site" backup power supply.

Please let me know if you have any questions. Your help is greatly appreciated.

Sincerely,

Whitman, Requardt & Associates, LLP

Darrin Geldert, PE
Associate

cc: George DiCarlo, Ron Tatariw, PWCSA
File